

WHAT IS CLAIMED IS:

1. A magnetic recording medium comprising:

a nonmagnetic support;

an undercoat layer containing a compound polymerizable

5 by radiation exposure; and

a magnetic layer containing ferromagnetic powder and a binder, in this order

wherein the undercoat layer has a thickness of from 0.1 to 1 μm , the binder contains a polyurethane resin having a glass transition temperature of from 100 to 200°C, the magnetic layer
10 has a thickness of from 20 to 150 nm, and an average particle size of the ferromagnetic powder is from 20 to 60 nm.

2. The magnetic recording medium according to claim 1,
15 wherein the undercoat layer has a thickness of from 0.3 to 0.8 μm .

3. The magnetic recording medium according to claim 1,
wherein the binder contains a polyurethane resin having a glass
20 transition temperature of from 120 to 170°C.

4. The magnetic recording medium according to claim 1,
wherein the magnetic layer has a thickness of from 20 to 100
nm.

25

5. The magnetic recording medium according to claim 1, wherein the magnetic layer has a thickness of from 20 to 50 nm.

5 6. The magnetic recording medium according to claim 1, wherein an average particle size of the ferromagnetic powder is from 20 to 50 nm.

10 7. The magnetic recording medium according to claim 1, wherein an average particle size of the ferromagnetic powder is from 20 to 45 nm.

8. The magnetic recording medium according to claim 1, further comprising a nonmagnetic layer containing nonmagnetic
15 inorganic powder and a binder so that the nonmagnetic support, the undercoat layer, the nonmagnetic layer and the magnetic layer are in this order.

20 9. The magnetic recording medium according to claim 8, wherein the nonmagnetic layer has a thickness of from 1.0 to 3.0 μm .

25 10. The magnetic recording medium according to claim 8, wherein the nonmagnetic layer has a thickness of from 1.0 to 2.5 μm .

11. The magnetic recording medium according to claim 8, wherein the nonmagnetic layer has a thickness of from 1.0 to 1.5 μm .

5

12. The magnetic recording medium according to claim 1, further comprising a back coat layer containing a carbon black and inorganic powder so that the back coat layer, the nonmagnetic support, the undercoat layer and the magnetic layer are in this order.

10

13. The magnetic recording medium according to claim 12, wherein the back coat layer has a thickness of from 0.2 to 1.0 μm .

15

14. The magnetic recording medium according to claim 12, wherein the back coat layer has a thickness of from 0.3 to 0.7 μm .

20

15. The magnetic recording medium according to claim 1, the compound polymerizable by radiation exposure is: a compound having a cyclic ether skeleton and two or more radiation-curable functional groups in a molecule; or a compound having a cyclic structure and an ether group and having two or more radiation-curable functional groups in a molecule.

25